



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,645	01/05/2005	Jean-Luc Bessede	34299-620	5192
<div>7590 12/12/2007</div> <div>Thelen Reid & Priest P O Box 640640 San Jose, CA 95164-0640</div> <div>EXAMINER LAM, CATHY FONG FONG</div> <div>ART UNIT 1794 PAPER NUMBER</div> <div>MAIL DATE 12/12/2007 DELIVERY MODE PAPER</div>				

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/520,645		BESSEDE ET AL.	
	Examiner		Art Unit	
	Cathy Lam		1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

In view of the amendment and remarks filed on September 20, 2007, the 112 rejection has been withdrawn. The pending claims however continue to be unpatentable As following:

Claim Rejections - 35 USC § 102

1. Claims 1-2, 5-7, 13-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gessinger et al (US 4707576).

Gessinger discloses an electric circuit breaker which comprised of two arching contact tips (6,8), the examiner is taking the position that this is analogous to the claimed arcing contact elements (10,18).

The arcing contact tips (6,8) which is made from a carbon fiber reinforced graphite, herein called graphite platelet. The graphite platelet is further impregnated with chromium particles (26) onto the surface. A solder foil (27) in the form of a paste or a powder is applied onto the surface of the platelet surface (col 3 L 64-67).

The examiner is taking the position that the Cr particles and the solder foil, together resemble the claimed electrically conducting material having the claimed resistance.

Although the prior art is silent about the resistance of the electrically conductive material, the examiner is taking the position that it would be inherent that Gessinger's Cr particles and solder foil layer possesses the same resistance since the copper is the main component of the paste.

2. Claims 1, 7-9, 13-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Swift et al (US 5599615).

Swift teaches an electrical component for making electrical devices, such as switches, sensors, etc. (col 5 L 25-26). The electrical component comprised of conductive fibers and a metallic matrix (col 3 L 25-26).

The conductive fibers are carbon fibers having diameter from about 4 to 10 μm (col 3 L 56-60). The conductive fibers can be a carbon/graphite fibers or metal plated carbon fibers (col 6 L 10-11). The carbon fibers are then coated with an electrically conductive metallic matrix which may contain copper (col 6 L 44-66).

The metallic matrix has a volume resistivity of less than 100 $\mu\Omega\text{-cm}$ (col 6 L 44-46).

Claim Rejections - 35 USC § 103

3. Claims 1-9 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0729162 A1 and FR 2115865.

Both French documents submitted by Applicant teach a composite comprised of carbon fiber and a copper matrix.

EP 0729162 A1 teaches a carbon or graphite fiber is coated with metal powder such as copper (col 1 1st ¶).

FR 2115865 teaches a graphite fiber is within a copper matrix (page 3 last ¶ & page 4 1st ¶).

The prior art does not each carbon fiber and graphite fiber are used together, nor do they disclose the resistance. However, one skill in the art would use carbon and graphite interchangeably because carbon and graphite are from the same element and

have similar properties, i.e. they are both electrically conductive as well as heat conductive, and are vastly used in electronic devices.

4. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swift et al (US 5599615).

Swift teaches the present invention but does not teach the carbon fibers are arranged in a 3-D braiding. Swift is silent about the wt% for the conductive material in the contact element and any particle sizes for the fibers or fillers.

In view of Swift's teaching, one skill in the art would choose a desired fiber arrangement, the weight ratio of the metallic matrix to the reinforcement material, etc., because these are only a matter of design choices. The fact that Swift clearly teaches the concept of the present invention.

Response to Arguments

5. Applicant's arguments filed on September 20, 2007 have been fully considered but they are not persuasive. The Gessinger reference clearly discloses the present invention. Swift is used as an electronic device such as switches, also teaches all the elements of the present invention. Thus, the art rejections are sustained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy Lam whose telephone number is (571) 272-1538. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Cathy Lam
Primary Examiner
Art Unit 1794